

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference 15818-26PCT | FOR FURTHER ACTION <small>See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)</small> | |
| International application No. PCT/CA 02/01677 | International filing date (day/month/year) 05.11.2002 | Priority date (day/month/year) 05.11.2002 |
| <p>International Patent Classification (IPC) or both national classification and IPC A61C13/00</p> <p>Applicant CYNOVAD INC. et al.</p> | | |
| <p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p> <p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the opinion II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input checked="" type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application | | |
| Date of submission of the demand 04.06.2004 | Date of completion of this report 02.02.2005 | |
| Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 | Authorized Officer  Hagberg, A Telephone No. +49 89 2399-7432 | |

JC20 Rec'd PCT/PTO 05 MAY 2005

**INTERNATIONAL PRELIMINARY
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I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-13 as originally filed

Claims, Numbers

1-41 as originally filed

Drawings, Sheets

1/8-8/8 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

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5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).
(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees, the applicant has:

restricted the claims.
 paid additional fees.
 paid additional fees under protest.
 neither restricted nor paid additional fees.

2. This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

complied with.
 not complied with for the following reasons:
see separate sheet

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

all parts.
 the parts relating to claims Nos. 1-32,35-41 .

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|---------------------------|-------------|
| Novelty (N) | Yes: Claims No: Claims | 1-32, 35-41 |
| Inventive step (IS) | Yes: Claims No: Claims | 1-32, 35-41 |
| Industrial applicability (IA) | Yes: Claims No: Claims | 1-32, 35-41 |

2. Citations and explanations

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see separate sheet

Re Item IV

Lack of unity of invention

1. Reference is made to the following document:

D1: EP-A-1252867 (Cicero Dental systems) 30 October 2002

2. The present application does not meet the requirements of Rule 13, PCT, because it relates to four different inventions.

The different inventions are:

- I. Claims 1-32: A method for designing a dental prosthesis
- II. Claims 33: A computer readable memory
- III. Claim 34: A computer data signal
- IV. Claim 35-41: A system for designing a dental prosthesis

There are no technical features common between any of the inventions.

The inventions are furthermore directed to solve different technical problems, namely:

- I. to simplify the computer aided design of a dental prosthesis
- II. to store instructions
- III. to transmit data
- IV. to provide hardware modules for a computer system

A technical relationship involving one or more of the same or corresponding special technical features in the sense of Rule 13.2 PCT therefore does not exist between the aforementioned four inventions, and the requirement of unity of invention referred to in Rule 13.1 PCT is not fulfilled.

Hence, the different inventions are not so linked as to form a single general inventive concept (Rule 13.1 PCT).

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

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Claim 1 defines a method of computer-aided design of a dental prosthesis. D1 discloses such a method, namely (cf. abstract, page 2, lines 27-34, page 8, line 54 - page 11, line 13, claims 1-5, 9, 10, figures):

A method for designing a dental prosthesis, the method comprising:
identifying a plurality of components of said dental prosthesis to be designed, each one of said plurality of components having a distinct function;
designing each of said plurality of components separately using virtual tools to produce virtual designs and generating separate data sets, while maintaining a relative reference among said components in a common reference frame; and
producing a dental prosthesis model data set representing said dental prosthesis using all of said separate data sets.

In particular, the layers of the tooth of D1 must be considered to be components of the tooth, and each layer is represented by a separate data set. Separate data sets for each component to be designed are inherent to computer aided design.

Hence, claim 1 does not meet the requirement of novelty (Article 33(2) PCT).

2. Claim 16, although phrased as an independent claim, defines all features of claim 1 and is therefore, according to Rule 6.4 PCT, dependent on claim 1.

Dependent claims 2-32 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2)(3) PCT), because these claims define well-known method steps practised by the skilled person in computer aided design of a dental prosthesis and in producing a dental prosthesis, which method steps, as far as they are not disclosed in D1 (passages as above), therefore define slight constructional changes in the method of claim 1 which come within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen.

3. The present application further does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 35 is not new in the sense of Article 33(2) PCT. The document D1 (passages as above), discloses:

A system for designing a dental prosthesis, the system comprising:
a data store module for storing separately a plurality of components of said dental prosthesis to be designed, wherein a relative reference is maintained among said plurality of components in a common reference frame,

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a designing module for designing each of said plurality of components separately using virtual tools to produce virtual designs of said plurality of components and generating separate data sets, and

an output module for associating each of said separate data sets together and outputting said separate data sets together to a manufacturing device.

In particular, the data store module, the designing module, and the output module of D1 are *suitable for* the said features (see also PCT international search and preliminary examination guidelines Part II, 5.24).

Hence, claim 35 does not meet the requirement of novelty (Article 33(2) PCT).

4. Dependent claim 36-41 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step, because all features of these claims, as far as they are not disclosed in D1 (passages as above), define slight constructional changes in the system of claim 35, which come within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen.

5. The attention of the applicant is further drawn to the fact that claims 1 and 16 do not meet the requirement of conciseness of Art. 6 and Rule 6.4 PCT.